AMENDMENT OF SOLICITATI	ON/MODIFICATI	ON OF CONT	RACT	1. Contract ID Code Cost Contract		Page 1 Of 15	
2. Amendment/Modification No.	3. Effective Date	4. Requisition/Puro	hase Req			. (If applicable)	
P00005	2007APR30	SEE SCH	EDULE				
6. Issued By	Code W56HZV	7. Administered By	(If other	than Item 6)		Code N62880	
U.S. ARMY TACOM LCMC		OFFICE OF NA					
AMSTA-AQ-ABGB		CHICAGO REGI		FICE STREET, ROOM	380		
ROBERT BEARDSLEE (586)574-8071 WARREN, MICHIGAN 48397-5000		CHICAGO, IL			360		
HTTP://CONTRACTING.TACOM.ARMY.MIL							
EMAIL: BEARDSLR@TACOM.ARMY.MIL			CD C	PAS NONE	A DD I	<b>PT</b> N62880	
8. Name And Address Of Contractor (No., Stre	et, City, County, State and		ТПТ		nt Of Solicitation		
UNIVERSITY OF LOUISVILLE RESEARCH F	•						
CONTROLLER'S OFFICE - SERVICE COMPL			1 -		<u> </u>		
291 EAST WARNOCK STREET				9B. Dated (See	Item 11)		
ROOM 223			[v]	10A. Modificat	ion Of Contract	/Order No.	
LOUISVILLE, KY 40292-0001			X			, Older 110.	
TYPE BUSINESS: Other Educational				W56HZV-04-C-			
			-	10B. Dated (Se	e Item 13)		
Code 48825 Facility Code	**************************************						
	HIS ITEM ONLY APPLI						
The above numbered solicitation is amend	led as set forth in item 14.	The hour and date s	pecified fo	or receipt of Of	fers		
is extended, is not extended.		1 1 4	d 11 . 14		. 1. 11	1. 6.11	
Offers must acknowledge receipt of this ame (a) By completing items 8 and 15, and return						dment on each copy of the	
offer submitted; or (c) By separate letter or							
ACKNOWLEDGMENT TO BE RECEIVED							
SPECIFIED MAY RESULT IN REJECTIO change may be made by telegram or letter, p							
opening hour and date specified.	To viaca caen telegram or	icuci manes referenc	e to the so	mentation and t	ans unicircuit,	and is received prior to the	
12. Accounting And Appropriation Data (If red ACRN: AD NET INCREASE: \$820,000.00	quired)					_	
ACRN: AD NET INCREASE: \$820,000.00							
13. THIS	ITEM ONLY APPLIES T	O MODIFICATION	S OF CO	NTRACTS/ORI	DERS		
KIND MOD CODE: G	It Modifies The Contra	act/Order No. As Des	cribed In	Item 14.			
A. This Change Order is Issued Pursual The Contract/Order No. In Item 10.				The Ch	anges Set Forth	In Item 14 Are Made In	
B. The Above Numbered Contract/Orde		The Administrative C	hanges (su	ich as changes i	n paving office,	appropriation data, etc.)	
Set Forth In Item 14, Pursuant To T	he Authority of FAR 43.10	03(b).					
X C. This Supplemental Agreement Is Ent	ereu into Pursuant 10 Au	thority OI: FAR 43.	103(a)(3	): Mutual Ag	greement		
D. Other (Specify type of modification a	and authority)						
E. IMPORTANT: Contractor is not,	X is required to sign	this document and r	eturn	(	opies to the Issu	ing Office.	
14. Description Of Amendment/Modification (	Organized by UCF section	headings, including s	olicitatior	n/contract subje	ct matter where	feasible.)	
SEE SECOND PAGE FOR DESCRIPTION							
Except as provided herein, all terms and condi-	tions of the document refer	renced in item 9A or	10A, as he	eretofore change	ed, remains uncl	nanged and in full force	
and effect.	<u> </u>	164 Name	J T:41	Of C4	Off: (T		
15A. Name And Title Of Signer (Type or print)	)	MICHAEL L	. CIONI		Officer (Type or	r print)	
15B. Contractor/Offeror	15C. Date Signed			.MIL (586)574	- / U / U	16C. Date Signed	
13D, CORHACIOI/OHEFOF	15C. Date Signed	Tob. United	states Of	Amei Ica		10C. Date Signed	
(0)	_	Ву		/SIGNED/		2007APR30	
(Signature of person authorized to sign) NSN 7540-01-152-8070		30-105-02	gnature o	f Contracting C		ORM 30 (REV. 10-83)	
		~ ~ ~ ~ <b>~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ </b>			~ ~ I'V	· · · · · · · · · · · · · · · · ·	

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Name of Offeror or Contractor: University of Louisville Research foundation inc.

SECTION A - SUPPLEMENTAL INFORMATION

- 1. Bilateral Modification P00005 changes Contract W56HZV-04-C-0314 in three ways as follows:
- a. It revises the Contract's requirements for the Contractor (University of Louisville Research Foundation, Inc.) to continue developing, testing, demonstrating, validating, and delivering two software tools, as follows: (i) Concept Modeling Tool Suite (CMTS), and Structural Gage Sensitivity Assessment (SGSA) software. These revisions are in accordance with Contract clause I53 (FAR 52.243-2), Changes Cost Reimbursement (Alternate V, dated April 1984).
  - b. It incorporates a negotiated settlement for the revised requirements in the amount of \$820,000.
  - c. It extends the term of the Contract through 30 Apr 09, and revises various delivery dates accordingly.
- 2. Under CLIN 0001, create SubCLIN 000104 in the amount of \$820,000. Increase the CLIN 0001 and Contract amounts by \$820,000, from \$1,499,934, to \$2,319,934.
- 3. The following Contract Sections, Exhibit, and Data Items have changed as a result of this Modification:

```
Contract Section B (Supplies or Services and Prices / Costs)
Contract Section C (Description/Specifications / Work Statement)
Contract Section F (Deliveries or Performance)
Contract Section G (Contract Administration Data)

Exhibit A, Contract Data Requirements List (CDRL, DD Form 1423)

Data Item No. A001 (Contractors Progress, Status, and Management Report)
Data Item No. A002 (Scientific and Technical Reports - Semi Annual Reports)
Data Item No. A003 (Scientific and Technical Report - Final Report)
Data Item No. A004 (Computer Software Product End Items - CMTS / SGSA Software)
Data Item No. A005 (Presentation Materials - CMTS / SGSA Training)
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The changed pages are attached.

4. Except for the change resulting from this Modification P00005, all other terms and conditions of this Contract, as previously modified, remain the same.

\*\*\* END OF NARRATIVE A 0005 \*\*\*

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ITEM NO	ror or Contractor: UNIVERSITY OF LOUISVILLE RESEARCH FOUR SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
TIEM NO		QUANTITI	UNII	UNITERICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
0001	UNIVERSITY OF LOUISVILLE	1	LO		\$2,319,934.00
0001	UNIVERSITI OF EGGISVIEDE	1	10		2,319,934.00
	NOUN: CMTS/SGSA SOFTWARE				
	SECURITY CLASS: Unclassified				
	Contractor shall furnish all the supplies and services to accomplish the task				
	specified in Section C "Scope of Work."				
	Estimated Cost: \$2,319,934 *				
	Revised by Modification P00005				
	Revised by mairied to 100005				
	(End of narrative B001)				
	(End of narrative Boot)				
	Townships and December				
	Inspection and Acceptance INSPECTION: Destination				
	Deliveries or Performance				
	DLVR SCH PERF COMPL				
	REL CD         QUANTITY         DATE           001         1         30-APR-2009				
	\$ 2,319,934.00				
000101	UNIVERSITY OF LOUISVILLE				
	PRON: R342C299R3 PRON AMD: 01 ACRN: AA AMS CD: 63300553D11				
	(AMOUNT: \$ 500,000.00)				
000102	UNIVERSITY OF LOUISVILLE				
000102	PRON: R352C155R3 PRON AMD: 01 ACRN: AB				
	AMS CD: 63300553D11				
	(AMOUNT: \$ 827,000.00)				

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Name of Offeror or Contractor: University of Louisville research foundation inc.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000103	UNIVERSITY OF LOUISVILLE				
	PRON: R362C053R3 PRON AMD: 01 ACRN: AC AMS CD: 622601H7700 (AMOUNT: \$ 172,934.00)				
000104	UNIVERSITY OF LOUISVILLE				
	PRON: R362C421R3 PRON AMD: 01 ACRN: AD AMS CD: 63300553300 (AMOUNT: \$ 820,000.00)				

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Name of Offeror or Contractor: University of Louisville Research Foundation inc.

#### B.1 Estimated Cost and Payment

- B.1.1 The estimated cost for performance of the work required under this contract is as stated in Section B Schedule.
- B.1.2 The Contractor will be paid for the cost stated in Section B under CLIN 0001 for the performance of work under the Contract the reimbursement of cost shall constitute full and complete consideration for the Contractor's service in connection with the work required and performed under this Contract.
- B.1.3 Allowable cost shall be determined, and payment shall be provided, in accordance with the Contract Clause entitled, "ALLOWABLE COST AND PAYMENT."

#### B.2 Payment

The Contractor may submit public vouchers on a monthly basis for payment under this Contract. The costs will be payable at the time of reimbursement at the same rate subject to any withholding pursuant to provisions of this Contract.

#### B.3 Funding

B.3.1 The Government shall provide funds under this Contract covering the estimated cost, on an incremental basis as provided for in the following funding schedule and pursuant to the Contract Clause entitled, "LIMITATION OF FUNDS." It is estimated that the incremental amounts are sufficient for the performance of work in each cited period. The Government may, at its discretion, allot such funds on an incremental basis within each fiscal year. The Contractor shall plan and execute the work required by this Contract to expend and/or commit funds compatible with the funding schedule below. Whenever the Contractor has reason to believe the funds allotted to this contract for any fiscal year are either insufficient or excessive for performing the work required in that fiscal year, the Contractor shall notify the Government.

### B.3.2 <u>Incremental Funding Schedule</u>

<u>Performance Period</u> <u>Amount</u>

Award through April 2007: \$1,499,934 \*

April 2007 through Contract Completion: \$ 820,000 \*

Total: \$2.319.934 \*

- B.4 Funds Allotted. The amount of funds currently allotted to this Contract are \$2,319,934. \*
- B.4.1 For the purpose of the Contract clause, "LIMITATION OF FUNDS," the total amount allotted by the Government to the Contract shall be the amount of funds allotted in paragraph B.4 above.
- B.4.2 In performing this Contract, the Contractor is not obligated to incur costs, in excess of the amount of funds allotted to the Contract, as shown in this clause, nor is the Government obligated to reimburse the Contractor for cost in excess of the amount of funds allotted to the Contract by the Government.
- \* Revised by Modification P00005.

\*\*\* END OF NARRATIVE B 0001 \*\*\*

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Name of Offeror or Contractor: University of Louisville Research foundation inc.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

#### C.1 Background

- C.1.1 The Army is interested in the development of software tools for preparing and applying finite element concept models that represent the fundamental architecture of both commercially-based and purpose-designed wheeled tactical ground vehicles. These software tools and associated concept models will support the rapid evaluation of the hull/frame and cab/crew compartment structures associated with such vehicles. Here "hull/frame" is defined as the vehicles' load-bearing components that integrates primary vehicle subsystems and allows the vehicle structure to withstand the operational loading generated during mission execution. "Cab/crew compartment" is defined as the enclosure housing the vehicle driver and mission support personnel.
- C.1.2 Assessment of static/dynamic performance parameters and structural integrity of contractor vehicle design proposals is the primary intended use of the tools developed under this project. The Army Source Selection and Evaluation process, during the systems acquisition phase of the military vehicle lifecycle, often requires the assessment of multiple vehicle designs in a short timeframe for major vehicle system procurements. The short timeframe does not permit detailed model development for the Army, thus creating a need for methodologies and tools to rapidly evaluate the performance and structural integrity of ground vehicle hull/frame assemblies and cab/crew compartments. The secondary intended use of the tools is the evaluation and optimization of hull/frame and cab/crew compartment concept architectures in the pre-systems acquisition phase of the military vehicle lifecycle.
- C.2 Concept Modeling Tool Suite (CMTS) Software
- C.2.1 The Contractor, functioning as an independent contractor and not as an agent of the Government, shall develop a CMTS tool \* that allows rapid evaluation of the structural performance and integrity of ground vehicle hull/frame and cab/crew compartment structures. The tool suite shall provide a means of developing finite element architecture concept models and using the concept models to analyze the effect of geometric, load, and material characteristics (input parameters) associated with the (i) hull/frame and cab/crew compartment architecture and (ii) primary vehicle subsystems on variables characterizing vehicle structural performance (response parameters). Primary vehicle subsystems are defined as the suspension (including steering mechanisms), payload, and propulsion system (see Attachment 1, Software Diagram). The Contractor shall obtain the Contracting Officer's Representative's (COR's) approval for commercial software selected for incorporation into the CMTS software and other software tools developed under this contract.
- C.2.2 Input parameters are defined as properties of the hull/frame, cab/crew compartment architecture, and primary vehicle subsystems that have a direct effect on the vehicle structural response. Examples of input parameters can include, but are not limited to, the following: component weights, component geometries, joint configurations, material properties, component attachment points, stiffness properties, damping properties, attachment method, etc. The Contractor shall determine which predefined input parameters of vehicle subsystems are necessary for inclusion in the analysis tool to insure calculation of correct response parameters.
- C.2.3 Response parameters are defined as the variables or performance measures returned by the CMTS as results and used to assess vehicle structure performance. These parameters shall include at a minimum: stiffness, modal parameters (natural frequencies, damping ratios, and normal modes), operational stresses, deformation patterns, strain energy distribution, component and total vehicle mass, and vehicle rotational inertia properties. The Contractor may add response parameters to this list.
- C.2.4 The software tool shall be modular in that templates of major vehicle subsystem types can be added as new technology emerges. The Contractor shall demonstrate the software modularity by incorporating templates for types of each major primary system and subsystem. Each module shall have its own documentation, consisting of html help files with a table of contents, operating instructions, example cases, and theoretical background. The Contractor shall provide this documentation to the COR in both help file format and in hardcopy.
- C.2.4.1 The Contractor shall develop payload templates for one (1) hull/frame type: Multiple rail ladder frames. The Contractor shall develop "composite structural assembly" (CSA) classes that can be used with CTI-based interactive feature methods (reference paragraph C.2.8 below) for building custom hull-frame assemblies and cab-crew compartments. These CSA classes shall incorporate component-level architecture elements (e.g., beams, panels, and joints), allowing the user to formulate non-standard assemblies that are savable and reusable. Examples might include frames with non-perpendicular crossmembers, or a full vehicle passenger compartment with no cargo area.
  - 1. Multiple rail ladder frame
- C.2.4.2 The Contractor shall develop cab/crew compartment templates for the following two (2) common cab/crew compartment types:
  - 1. Engine forward
  - 2. Cab forward
- \* Revised by Modification P00005

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Name of Offeror or Contractor: University of Louisville Research Foundation inc.

The Contractor shall adapt the cab and crew personnel templates to include ergonomic functionality. This functionality shall take the form of "template calculations" that calculate body clearance (head room, etc.), quantify access to critical controls (steering, egress handles, etc.), and determine external fields of vision.

- C.2.4.3 The Contractor shall develop suspension templates for the following five (5) suspension types:
  - 1. Leaf spring
  - 2. Trailing arm
  - 3. Air spring
  - 4. Longitudinal torsion bar
  - 5. Transverse torsion bar
- C.2.4.4 The Contractor shall develop propulsion system templates for the following two (2) propulsion system types:
  - 1. Conventional (engine transmission transfer case differential)
  - 2. Parallel hybrid
  - 3. Electric powertrain
  - 4. Hybrid-hyraulic powertrain
- C.2.4.5 The Contractor shall develop payload templates for the following three (3) payload types:
  - 1. Cargo box
  - 2. Flat rack
  - 3. Isolated container
  - 4. Fifth-wheel trailers
- C.2.4.6 The Contractor shall develop steering system dynamics classes and templates for the following three (3) steering methods:
  - 1. Parallel link
  - 2. Rack and pinion
  - 3. Pitman arm
- C.2.4.7 The Contractor shall develop component / assembly classes for vehicle closures (e.g., access covers, doors, etc.) and miscellaneous non-structural features (e.g., fuel tanks, applique armor, etc.).
- C.2.5 The CMTS software shall be compatible with the structural analysis input files used with the commercially available NASTRAN finite element analysis code. In addition to developing template-based hull/frame and cab/crew compartment finite element models, the CMTS shall allow the user to directly incorporate existing fine element models of either or both assemblies. The software tool shall have the ability to modify the existing assembly model, if used, to incorporate the major vehicle subsystems. A commercial fine element analysis solver, such as NASTRAN, may be used as a means of determining some or all of the system response parameters. However, if a commercial finite element analysis solver is incorporated, the software tool shall be automated in such a way that the user need only provide the template input parameters.
- C.2.6 The software tool shall provide a means for specifying input parameters associated with four (4) specific analysis types.
  - 1. Static response
  - Modal response
  - 3. Frequency domain response
  - 4. Time domain response
- C.2.6.1 Static response involves the application of concentrated and distributed loads at user-specified locations, and determination of response variables, also at user-specified locations. Static response inputs may address the transportation requirements of flat/lift towing of the vehicle from tow eyes, and vehicle lift from lifting eyes.
- C.2.6.2 For modal response calculations, the user shall specify boundary constraints and a frequency range of interest. The CMTS software shall determine system natural frequencies and modes.
- C.2.6.3 For frequency domain response calculations, the user will specify input location and response location. The CMTS software shall calculate the corresponding compliance transfer functions as a function of input frequency.
- \* Revised by Modification P00005

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- C.2.6.4 The CMTS software shall include a dynamic load module that permits the user to specify the time domain load and suspension inputs as analytical singularity functions. Response variables shall be determined using an appropriate external solver and displayed in the time domain.
- C.2.7 The software tool shall include means of graphic visualization of simulation results.
- C.2.7.1 The CMTS graphic visualization features shall include, but are not limited to, the following: means for displaying contour plots of hull/frame and cab/crew compartment stress, strain, and deformation due to standard structural and simulated operational loads.
- C.2.7.2 The CMTS software shall provide a means of graphically displaying X-Y plots of stress/strain/displacement time histories and frequency response transfer functions at hull/frame locations of the user's choice. The software tool shall provide a means for the user to query individual node/element stress/strain/displacement values.
- C.2.7.3 The software tool shall provide a means of exporting simulation results in both a plain ASCII format, and a summary report format
- C.2.7.4 Incorporation of commercial post-processing and visualization tools into the CMTS is acceptable, however, the software tool shall be automated in such a way that the user interface for selecting output result displays is the same user interface used for providing input parameters.
- C.2.8 The CMTS user interface shall be a standard Microsoft Windows graphical user interface that includes the following features:
- 1. Menu bar with options allowing standard file manipulation operations, template selection and editing, viewing and export of results, and access to program documentation.
  - 2. Graphical toolbar providing quick access to critical program functions.
  - 3. Work area for populating templates, specifying analysis parameters, and viewing results.
  - 4. Status bar.
  - 5. Select and drag capabilities
  - 6. Drag and drop capabilities
  - 7. Right-click menu functionality
- C.2.8.1 The Contractor is responsible for the graphic design (icons, window layouts, template motifs, etc.) of the used interface.
- C.2.9.1 The CMTS software shall include a help system developed using the Microsoft HTML Help 1.4 software development kit (or latest equivalent standard). The help system shall include context sensitive help (including "What's This" help for primary windows and "Tooltip" help for interface features), a table of contents, topic index, and keyword search feature. The help system shall function as a self-contained manual, describing program operation, assumptions and mathematical theory embodied in the software and interpretation of results.
- C.2.9.2 The Contractor shall adapt the new templates, added to SOW Sections C.2.4.1 through C.2.4.7, via Modification P00005, into the help system described in Section C.2.9.1.
- C.3 CMTS Software Validation
- $\hbox{{\tt C.3.1}} \quad \hbox{{\tt The Contractor shall perform sensitivity analyses to check the software} \\$

for the purpose of ensuring the models developed with the software are reacting to input sets in an expected, mathematically predictable manner. These analyses include preparing and running tests to compare results for systematically varied sets of input data to see if expected trends in output are demonstrated. The sensitivity analysis shall be performed on all concept model templates developed under this contract.

- C.3.2 The Contractor shall perform a stress test by testing the software tool with parameter values reflecting the anticipated extremes in conditions or with combinations of parameter values estimated to cause the most extreme results. The purpose of the stress test is to demonstrate the robustness of the software tool. The stress test shall be performed on all templates developed under this contract. The software tool shall include error trap routines to prevent template population errors or extreme input conditions from creating unrecoverable errors or program instability.
- \* Revised by Modification P00005

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C.3.3.1 The Contractor shall demonstrate the validity of the CMTS software by using the software to model three (3) wheeled tactical ground vehicles. At least one (1) of these must be a dual-use, commercially-based platform. Among the three (3) vehicles modeled, a minimum of two (2) different propulsion systems and two (2) different suspension types shall be represented (i.e., the three (3) vehicles shall not have the same propulsion and suspension type). The Contractor shall simulate four (4) operational scenarios, to include the following:

- 1. Static loads necessary to determine static structural parameters (stiffness, natural frequencies and normal modes, diagonal distortion, stress and deformation distributions).
- 2. Being lifted from its lift eyes
- 3. Being lift-towed
- 4. Traversing a test course terrain of which a digitized terrain profile

Note: A total of twelve (12) CMTS simulations are required (i.e., three (3) vehicles, each under four (4) operational scenarios).

- C.3.3.2 The Contractor shall demonstrate the validity of the enhanced CMTS software, developed under Modification P00005, by simulating three (3) additional operational scenarios to include the following:
  - 5. The vehicle traversing a discrete obstacle
  - 6. The vehicle performing a steering maneuver
  - 7. The vehicle being involved in a rail impact event

Note: A total of nine (9) simulations are required (i.e., three (3) vehicles, each under the three (3) operational scenarios labeled 5, 6, and 7 above).

- C.3.4 The Contractor shall compare CMTS results with existing experimental data available to the Contractor from the public domain or from (a) manufacturer(s) of commercial vehicles that are comparable in size and architecture to U.S. Army tactical trucks. It is not necessary for the Contractor to instrument and test vehicles to secure this validation data.
- C.3.5 The Contractor shall vary the major subsystem parameters (such as tire inflation pressure, payload weight, suspension spring or damping properties, etc.) where practical, and repeat the exercises described in paragraph C.3.3.1 and C.3.3.2 to further validate the robustness of the software tool.
- C.3.6 The Contractor shall demonstrate the accuracy of the software tool by comparing results of exercises described in paragraphs C.3.3.1, C.3.3.2, C.3.4, and C.3.5 with results generated using proven alternative analysis methods (e.g., high-fidelity, detailed, finite element models).
- C.4 CMTS Methodological Development and Validation
- C.4.1 The Contractor shall develop and validate modeling and analysis methodologies necessary for the development of the CMTS.
- C.4.1.1 The Contractor shall develop and validate methods for parametric representation of critical structural elements found in hull/frame assemblies and cab/crew compartments. These elements shall include, but are not limited to, the following:
  - 1. Shell/plate structures representing structural and non-structural armor
  - Beam-like components subjected to axial, torsional, and transverse loads
  - 3. Major body joints integrating the geometries of hull/frame cab/crew compartment architectures
  - 4. Component assembly joints
  - 5. Non-structural inertia elements
- C.4.1.2 Methodological validation studies shall be performed on a minimum of five (5) (total) commercially-based and purpose-designed wheeled tactical ground vehicles, and shall involve comparison of parametric representation results with results from highly detailed finite element models and experimental measurements.
- C.5 Structural Gauge Sensitivity Assessment (SGSA) Software
- C.5.1 The Contractor shall develop and validate methods for structural parameter sensitivity assessment that can be used for (i) comparative evaluation of overall vehicle structural effectiveness, (ii) locating structural weak points, and (iii) identifying weight reduction opportunities.

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C.5.1.1 These structural gauge sensitivity methods must be applicable to a wide range of wheeled tactical ground vehicles. They must have a well-developed and documented physical and mathematical foundation.

- C.5.1.2 These structural gauge sensitivity methods must be capable of structural assessment at the local, component, and global-vehicle levels
- C.5.1.3 The Contractor shall develop an application/interpretation methodology for applying these structural gauge sensitivity methods to dual-use and purpose-build wheeled tactical ground vehicles.
- C.5.2 The Contractor shall develop an SGSA software tool, as a module of the CMTS software, for automating the application and \* interpretation of structural gauge sensitivity parameters. The Contractor may select a program architecture appropriate for this SGSA software tool.
- C.5.3 Requirements for SGSA user interface standards, help system, and validation testing are identical to those specified for the CMTS software, with the following exceptions:
- C.5.3.1 Only two (2) wheeled tactical ground vehicle platforms shall be used for validating the SGSA module. Vehicle-level SGSA valiation will be based soley upon finite element results.
- C.5.3.2 The Contractor shall provide experimentally-based validation studies for local and component structural gauge sensitivity only using existing experimental data available to the Contractor. It is not necessary for the Contractor to instrument and test vehicles to secure this validation data.
- C.6 Deliverables
- C.6.1 The Contractor shall deliver Contractor's Progress, Status, and Management Reports in accordance with (IAW) Exhibit A, Contract Data Requirements List (CDRL), DD Form 1423, Data Item Number A001.
- C.6.2 The Contractor shall deliver quarterly technical reports IAW Exhibit A, CDRL, DD Form 1423, Data Item Number A002.
- C.6.3 The Contractor shall deliver a final technical report IAW Exhibit A, CDRL, DD Form 1423, Data Item Number A003.
- C.6.4 The Contractor shall deliver the following CMTS modules, with associated help system, documentation, and source code, to the COR as they are completed, IAW Exhibit A, CDRL, DD Form 1423, Data Item Number A004:
  - 1. Rigid Body Response module and library functions supporting the Response modules
  - 2. Static Response module
  - 3. Modal Response module
  - 4. Frequency Domain Response module
  - 5. Time Domain Response module
  - 6. Structural Gage Sensitivity Analysis module

The parties anticipate the Contractor will complete CMTS modules from 12 months through 24 months after Modification P00005 award. The Contractor shall deliver all CMTS modules by 30 Apr 09.

- C.6.5.1 The Contractor shall deliver a one to two (1-2) day short course training seminar to the Government, for six (6) people, on the use of the CMTS software. The seminar shall be delivered on-site at TACOM, in Warren, MI, by 30 Sep 07, by one or more qualified perons representing the Contractor. The Contractor shall provide a seminar outline and copies of training materials, for six (6) people, to the Government IAW Exhibit A, CDRL, DD Form 1423, Data Item Number A005.
- C.6.5.2 The Contractor shall deliver a one to two (1-2) day short course training seminar to the Government, for six (6) people, on the use of the CMTS software, incorporating the new templates and work performed under Modification P00005. The seminar shall be delivered on-site at TACOM, in Warren, MI, by 30 Apr 09, by one or more qualified persons representating the Contractor. The Contractor shall provide a seminar outline and copies of training materials, for six (6) people, to the Government IAW Exhibit A, CDRL, DD Form 1423, Data Item Number A005.
- C.7 Kick-Off Meeting.

The Contractor shall hold a one-day (1) day kick-off meeting, either at TACOM or via teleconference, no later than two (2) weeks after Modification P00005 award to discuss the Contractor's planned approach for accomplishing this scope of work, as changed by Modification P00005.

CONTINI	IATION	ISHEET

# Reference No. of Document Being Continued

PIIN/SIIN W56HZV-04-C-0314

MOD/AMD P00005

Page 11 of 15

Name of Offeror or Contractor: University of Louisville Research foundation inc.

C.8 Presentations

C.8.1 The Contractor shall provide two presentations at its site at 12 months and 24 months after contract award. These presentations shall discuss the Contractor's progress toward meeting the contract's requirements, and shall include a demonstration of the CMTS and SGSA software in development.

 $\hbox{C.8.2} \quad \hbox{The Contractor shall provide four (4) CMTS presentations, as follows:} \\$ 

Presentation #1: By 31 Oct 07, at TACOM, in Warren, MI

Presentation #2: By 30 Apr 08, either at the Contractor's site in Louisville, KY, or by teleconference

Presentation #3: By 31 Oct 08, at TACOM, in Warren, MI

Presentation #4: By 30 Apr 09, at TACOM, in Warren, MI

These presentation shall discuss the Contractor's progress toward meeting the contract's requirements, and shall include a demonstration of the CMTS software.

\*\*\* END OF NARRATIVE C 0001 \*\*\*

<sup>\*</sup> Revised by Modification P00005

# Reference No. of Document Being Continued

MOD/AMD P00005

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PIIN/SIIN W56HZV-04-C-0314

Name of Offeror or Contractor: University of Louisville research foundation inc.

SECTION F - DELIVERIES OR PERFORMANCE

### F.3 DELIVERY OF REPORTS AND SOFTWARE

The Contractor shall submit all reports and software electronically in accordance with (IAW) Exhibit A, Contract Data Requuirements List (CDRL) (DD Form 1423).

### F.4 PERIOD OF PERFORMANCE

The period of performance for this Contract shall be through 30 Apr 09.  $^{\star}$ 

\* Revised by Modification P00005.

\*\*\* END OF NARRATIVE F 0001 \*\*\*

# Reference No. of Document Being Continued

PIIN/SIIN W56HZV-04-C-0314

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Name of Offeror or Contractor: University of Louisville research foundation inc.

SECTION G - CONTRACT ADMINISTRATION DATA

PRON/

 LINE
 AMS CD/
 OBLG STAT/
 INCREASE/DECREASE
 CUMULATIVE

 ITEM
 MIPR
 ACRN
 JOB ORD NO
 PRIOR AMOUNT
 AMOUNT
 AMOUNT
 AMOUNT

 000104
 R362C421R3
 AD
 1
 \$
 0.00
 \$
 820,000.00
 \$
 820,000.00

63300553300 62C421

NET CHANGE \$ 820,000.00

 SERVICE
 NET CHANGE
 ACCOUNTING
 INCREASE/DECREASE

 NAME
 BY ACRN
 ACCOUNTING CLASSIFICATION
 STATION
 AMOUNT

Army AD 21 62040000066N6N7EP6330052512 S20113 W56HZV \$ <u>820,000.00</u>

NET CHANGE \$ 820,000.00

PRIOR AMOUNT INCREASE/DECREASE CUMULATIVE
OF AWARD AMOUNT OBLIG AMT

NET CHANGE FOR AWARD: \$ 1,499,934.00 \$ 820,000.00 \$ 2,319,934.00

ACRN EDI ACCOUNTING CLASSIFICATION

AD 21 060720400000 S20113 66N6N7E633005533002512 62C421S20113 W56HZV

# Reference No. of Document Being Continued

PIIN/SIIN W56HZV-04-C-0314

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Name of Offeror or Contractor: University of Louisville research foundation inc.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.18 SUBCONTRACTING PLAN (for Basic Contract)

The Contractor has submitted a subcontracting plan dated 7 May 04, and revised 4 Jun 04, which is hereby incorporated into this contract by reference pursuant to the requirements of FAR 52.219-9 and DFARS 252.219-7003.

H.19 SUBCONTRACTING PLAN (for Modification P00005)

The Contractor has submitted a subcontracting plan dated 26 Apr 07, which is hereby incorporated into this contract by reference pursuant to the requirements of FAR 52.219-9 and DFARS 252.219-7003.

\* Revised by Modification P00005

\*\*\* END OF NARRATIVE H 0001 \*\*\*

# Reference No. of Document Being Continued

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Name of Offeror or Contractor: University of Louisville research foundation inc.

PIIN/SIIN W56HZV-04-C-0314

SECTION J - LIST OF ATTACHMENTS

List of			Number	
Addenda	Title	Date	of Pages	Transmitted By
Exhibit A	CONTRACT DATA REQUIREMENTS LIST (CDRL, DD FORM 1423)	23-APR-2007	010	

CONTRACT DATA REQUIREMENTS LIST (DD Form 1423)

Form Approval OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for retrieving instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188, Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract No. listed in Block E.

A.	CONTRACT LINE ITEM NO.:	0002		D.		SYSTEM/ITEM:		
В.	EXHIBIT:	A		E.		CONTRACT NO:	W56HZV-04-	C-0314
C.	CATEGORY:			F.		CONTRACTOR:	University	of Louisville
1.	DATA ITEM NO:	A001						
2.	TITLE OF DATA ITEM:	Contractor's Progre	ess,	Status, and	Mar	agement Report		
3.	SUBTITLE:							
4.	AUTHORITY:	DI-MGMT-80227(T)						
5.	CONTRACT REFERENCES:	Scope of Work (SOW)	), Se	ctions C.6.1				
6.	REQUIRING OFFICE:	AMSRD-TAR-N	9.	DIST. STATE	EMEN	T REQUIRED:	12.	DATE OF FIRST SUB:
								See Block 16
7.	DD250 REQ:	LT	10.	FREQUENCY:	Se	ee Block 16	13.	DATE OF SUBS. SUB:
8.	APP CODE:		11.	AS OF DATE:				See Block 16
14.	DISTRIBUTION	A. ADDRESSES				B. COPIES:	DRAFT	FINAL
Dr. David Lamb, Contracting Officer's Representative (COR), E-mail, LambD@tacom.army.mil							1	
Robert Beardslee, Contract Specialist, E-mail: beardslr@tacom.army.mil						1		
John Chiappe, Administrative Contracting Officer, E-mail: John.Chiappe@navy.mil						<u>1</u>		
						15. TOTAL:		1 *

\* In distributing the electronic report, according to the schedule in Block 16 below, the Contractor shall deliver one (1) copy to the Government, sent to Dr. Lamb's, Mr. Beardslee's, and Mr. Chiappe's e-mail addresses.

### 16. REMARKS:

- a. Basic Period: The Contractor shall deliver a "Contractor's Progress, Status and Management Report" every other month, starting sixty (60) days after Contract award. Reports shall be due no later than five (5) working days after the end of the calendar month in which a report is due.
- b. Complete the reports in accordance with (IAW) Data Item Description (DID) DI-MGMT-80227(T), "Contractor's Progress, Status, and Management Report." The COR is responsible for accepting or rejecting the "Contractor's Progress, Status, and Management Reports." See DID DI-MGMT-80227, at the internet address below, for instructions on completing the required report. Note Tailoring: Delete paragraphs 10.3g, k, and 1 from DID DI-MGMT-80227.

http://assist.daps.dla.mil/docimages/0001/48/17/DI80227.PD8

- c. Prepare the reports in the Contractor's format. Submit the reports using any of the following electronic formats:
- (1) Files readable using these Microsoft\*\* Office XP or Microsoft\*\* Office 2002 and lower Products: Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print or scan images of spreadsheets are not acceptable. Please see security note below for caution regarding use of macros.
- \*\* Registered Trademark

 PIIN/SIIN
 W56HZV-04-C-0314

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 P00005

 ATT/EXH ID
 Exhibit A

 PAGE
 2

- (2) Files in Adobe PDF (Portable Document Format). When scanning documents, scanner should be set to 200 dots per inch.
- (3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to Internet websites or web pages for reference information. All linked information must be contained within your electronic report, and be accessible offline.
- (4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten (10) calendar days before the draft report's due date. All alternate methods must be at no cost to the Government.

NOTE (Macros): The virus scanning software used by our e-mail systems cannot always distinguish a macro from a virus. Therefore, sending a macro embedded in an e-mail message or an e-mail attachment may cause the e-mail report to be guarantined.

- d. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, another acceptable media is a 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.
- (1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Previously "zipped" files were accepted, but due to security concerns these zipped attachements cannot be received through our mail system. You may use multiple e-mail messages if necessary, however you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."
- (2) 650 MEGABYTE CD ROM to be delivered via U.S. Mail or other carrier. The Contractor shall label all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number. Exterior mailing envelopes containing disks must be addressed to the following address:

Dr. David Lamb (AMSRD-TAR-N), MS 157 U.S. Army TACOM Life Cycle Management Command (TACOM LCMC) 6501 East 11 Mile Road Warren, MI 48397-5000

NOTE: Please select only one medium by which to transmit each report. For instance, do no submit a report via e-mail and CD ROM.

PIIN/SIIN W56HZV-04-C-0314 1. DATA ITEM NO....: A002 MOD/AMD P00005 2. TITLE OF DATA ITEM....: Scientific and Technical Reports ATT/EXH ID 3. SUBTITLE..... Quarterly Reports PAGE 3 4. AUTHORITY..... DI-MISC-80711A(T) 5. CONTRACT REFERENCES...: Scope of Work (SOW), Sections C.6.2 6. REQUIRING OFFICE.....: AMSRD-TAR-N 9. DIST. STATEMENT REQUIRED: 12. DATE OF FIRST SUB: See Block 16 10. FREQUENCY: See Block 16 13. DATE OF SUBS. SUB: 7. DD250 REQ..... DD 8. APP CODE....: 11. AS OF DATE: See Block 16 A. ADDRESSES DRAFT 14. DISTRIBUTION B. COPIES: FINAL Ken Deylami, Contracting Officer's Representative (COR), E-mail, DeylamiK@tacom.army.mil Robert Beardslee, Contract Specialist, E-mail: beardslr@tacom.army.mil 1 Ramsey Baerga, Administrative Contracting Officer, E-mail: baergar@onr.navy.mil 1

15. TOTAL:

1 \*

\* In distributing the electronic report, according to the schedule in Block 16 below, the Contractor shall deliver one (1) copy to the Government, sent to Mr. Deylami's, Mr. Beardslee's, and Mr. Baerga's e-mail addresses.

### 16. REMARKS:

- a. Basic Period: The Contractor shall deliver one (1) draft "Scientific and Technical Report"

  every three (3) months after contract award. The COR shall review the draft report and return it to the

  \*\*\*

  Contractor within one (1) week of receipt with comments. The Contractor shall submit one (1) final

  semi-annual "Scientific and Technical Report" within two (2) weeks after receipt of draft comments.
- b. Complete the reports IAW DID DI-MISC-80711A(T), "Scientific and Technical Reports." See the data item description (DI-MISC-80711A), at the internet address below, for instructions on completing the required report. Note Tailoring: Delete paragraph 10.2 from DID DI-MISC-80711A.

http://assist.daps.dla.mil/docimages/0002/27/88/80711A.PD4

Besides the information required by DID DI-MISC-80711A(T), the reports shall describe the development of the methodologies being implemented in the software tool suite, and the development of the software tool suite itself. Reports shall also address informational sources and references accessed, assumptions and simplifications made, sensitivity analysis and stress test results, demonstration and validation status, and projected improvements to the software tool suite.

- c. The COR is responsible for accepting or rejecting the draft and final reports.
- d. Prepare the reports in the Contractor's format. Submit the reports using any of the following electronic formats:
- (1) Files readable using these Office XP\*\* or Microsoft Office 97\*\* Products (TACOM can currently read OFFICE 97\*\* and lower): Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable. Executable files are unacceptable.
  - (2) Files in Adobe PDF (Portable Document Format). Scanners should be set to 200 dots per inch.
- (3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within your electronic report, and be accessible offline.
- (4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten calendar days before the draft report's due date. All alternate methods must be at no cost to the Government.

NOTE (Hyperlinks): Documents (submitted using any of the above formats) must not contain active links (hyperlinks) to any other documents that are not contained in the report. This includes links to live Internet web site or web pages. All linked information must be contained within your electronic offer and be accessible offline.

- \*\* Registered Trademark
- \*\*\* Revised by Modification P00005

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MOD/AMD P00005
ATT/EXH ID
PAGE 4

NOTE (Macros): The virus scanning software used by our e-mail systems cannot always distinguish a macro from a virus. Therefore, sending a macro embedded in an e-mail message or an e-mail attachment may cause the e-mail report to be quarantined.

NOTE (Password Protection): Files may be read-only, password protected.

- e. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, other acceptable media include 100 or 250 Megabyte Zip\*-disk, 3 1/2 inch floppy disk, or 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.
- (1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Use the file compression described in the NOTE in paragraph 16d(4) above. You may use multiple e-mail messages if necessary, however, you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."
- (2) 100 or 250 MEGABYTE ZIP\*-DISK, 3 1/2 INCH DISK, OR 650 MEGABYTE CD ROM via U.S. Mail or other carrier. The Contractor shall label all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number. Exterior mailing envelopes containing disks must be addressed to the following address:

Mr. Ken Deylami (AMSRD-TAR-N), MS 272 U.S. Army Tank-automotive and Armaments Command (TACOM) 6501 East 11 Mile Road Warren, MI 48397-5000

NOTE: Please select only one medium by which to transmit each report. For instance, do no submit a report via e-mail and 100 megabyte  ${\tt Zip*-disk}$ .

\* Registered Trademark

PIIN/SIIN W56HZV-04-C-0314

12. DATE OF FIRST SUB:
See Block 16
13. DATE OF SUBS. SUB:

See Block 16

MOD/AMD P00005

ATT/EXH ID

2. TITLE OF DATA ITEM...: Scientific and Technical Report

3. SUBTITLE.....: Final Report

PAGE 5

4. AUTHORITY.....: DI-MISC-80711A(T)

1. DATA ITEM NO....: A003

5. CONTRACT REFERENCES...: Scope of Work (SOW), Sections C.6.3

6. REQUIRING OFFICE.....: AMSRD-TAR-N 9. DIST. STATEMENT REQUIRED:

7. DD250 REQ.....: DD 10. FREQUENCY: See Block 16

8. APP CODE...... 11. AS OF DATE:

14. DISTRIBUTION A. ADDRESSES B. COPIES: DRAFT FINAL

Dr. David Lamb, Contracting Officer's Representative (COR), E-mail, LambD@tacom.army.mil 1 1
Robert Beardslee, Contract Specialist, E-mail: beardslr@tacom.army.mil 1
John Chiappe, Administrative Contracting Officer, E-mail: John.Chiappe@navy.mil 1

15. TOTAL: 1 1 \*

\* In distributing the electronic report, according to the schedule in Block 16 below, the Contractor shall deliver one (1) copy to the Government, sent to Dr. Lamb's, Mr. Beardslee's, and Mr. Chiappe's e-mail addresses.

#### 16. REMARKS:

a. Basic Period: The Contractor shall deliver one (1) draft "Scientific and Technical Report,"
by 6 Apr 09. The draft report shall include a completed Standard Form (SF) 298 (Report Documentation \*\*
Page) as the report's cover sheet. The COR shall review the draft report and return it to the
Contractor by 13 Apr 09, with comments. The Contractor shall submit one (1) final "Scientific and \*\*
Technical Report" (with the completed SF 298) by 30 Apr 09.

b. Complete the reports IAW DID DI-MISC-80711A(T), "Scientific and Technical Reports." See the data item description (DI-MISC-80711A), at the internet address below, for instructions on completing the required report. Note Tailoring: Delete paragraph 10.2 from DID DI-MISC-80711A.

http://assist.daps.dla.mil/docimages/0002/27/88/80711A.PD4

Besides the information required by DID DI-MISC-80711A(T), the reports shall describe the development, demonstration, and validation of the software tool at the end of the contract performance period. The reports shall also include copies of all analytical and experimentally-based test data used for the validation portion of this contract.

c. The COR is responsible for accepting or rejecting the draft and final reports, and for submitting the approved final report to the Defense Technical Information Center (DTIC), in Ft. Belvoir, VA.

You may download the SF 298 form, including instructions for completing the form, at the following internet address:

http://www.dtic.mil/dtic/submitting/how\_submit.html

For each unclassified report, the Contractor shall fill in Block 12a (Distribution/Availability Statement) of the SF 298 with one of the following statements:

- (a) Approved for public release; distribution unlimited
- (b) Distribution authorized to U.S. Government Agencies only; contains proprietary information

Note: After reviewing the Contractor's entry in Block 12a, TACOM has final responsibility for assigning a distribution statement.

Note: Be sure to mark the Scientific and Technical Report with the appropriate legend, per the Section I clause entitled, "Rights in Technical Data - Noncommercial Items" (DFARS 252.227-7013).

Block 13 (Abstract). The abstract must identify the purpose of the work and briefly describe the work carried out, the finding or results, and the potential applications of the effort. Since the

Department of Defense (DOD) will be publishing the abstract, it must not contain any proprietary or classified data.

- d. Prepare the reports in the Contractor's format. Submit the reports using any of the following electronic formats:
- (1) Files readable using these Microsoft\* Office XP or Microsoft\* Office 2002 and lower Products: Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print or scan images of spreadsheets are not acceptable. Please see security note below for caution regarding use of macros.
- (2) Files in Adobe PDF (Portable Document Format). When scanning documents, scanner should be set to 200 dots per inch.
- (3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to Internet websites or web pages for reference information. All linked information must be contained within your electronic report, and be accessible offline.
- (4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten (10) calendar days before the draft report's due date. All alternate methods must be at no cost to the Government.

NOTE (Macros): The virus scanning software used by our e-mail systems cannot always distinguish a macro from a virus. Therefore, sending a macro embedded in an e-mail message or an e-mail attachment may cause the e-mail report to be quarantined.

- e. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, another acceptable media is a 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.
- (1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Previously "zipped" files were accepted, but due to security concerns these zipped attachements cannot be received through our mail system. You may use multiple e-mail messages if necessary, however you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."
- (2) 650 MEGABYTE CD ROM to be delivered via U.S. Mail or other carrier. The Contractor shall label all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number. Exterior mailing envelopes containing disks must be addressed to the following address:

Dr. David Lamb (AMSRD-TAR-N), MS 157 U.S. Army TACOM Life Cycle Management Command (TACOM LCMC) 6501 East 11 Mile Road Warren, MI 48397-5000

NOTE: Please select only one medium by which to transmit each report. For instance, do no submit a report via e-mail and CD ROM.

\* Registered Trademark

PIIN/SIIN W56HZV-04-C-0314

MOD/AMD P00005

13. DATE OF SUBS. SUB:

See Block 16

\* \*

\* \*

\* \*

2.	DATA ITEM NO: TITLE OF DATA ITEM: SUBTITLE:	A004 Computer Software Product End Items PA	MD POUUUS H ID AGE 7	
	AUTHORITY:			**
5.	CONTRACT REFERENCES:	Scope of Work (SOW), Sections C.6.4		* *
6.	REQUIRING OFFICE:	AMSRD-TAR-N 9. DIST. STATEMENT REQUIRED: 12. DA	ATE OF FIRST	SUB:
		Sec.	e Block 16	

10. FREQUENCY: See Block 16

14. DISTRIBUTION A. ADDRESSES B. COPIES: DRAFT FINAL

11. AS OF DATE:

Dr. David Lamb, Contracting Officer's Representative (COR), E-mail, LambD@tacom.army.mil

15. TOTAL:

#### 16. REMARKS:

a. The Contractor shall deliver all software products, help system, documentation (including instructions for executing, maintaining, and trouble-shooting the software), and models developed for demonstration and validation. Specifically, the Contractor shall deliver the following CMTS modules as they are completed:

(1) Rigid Body Response module and library functions supporting the response modules

(2) Static Response module

(3) Modal Response module

7. DD250 REQ.....: DD

8. APP CODE....:

(4) Frequency Domain Response module

(5) Time Domain Response module

(6) Structural Gage Sensitivity Analysis module

The parties anticipate the Contractor will complete CMTS modules from 12 months through 24 months after Modification P00005 award. The Contractor shall deliver all CMTS modules by 30 Apr 09. All software products, including help system, documentation, and models shall be provided on appropriate storage media (CD-ROM and write-protected zip disks). The disks shall include both source code and a self-installing set-up program.

b. The COR is responsible for accepting or rejecting the delivered software products, help system, documentation, and source code. See DID DI-MCCR-80700, at the internet address below:

http://assist.daps.dla.mil/docimages/0001/48/72/W0285W.PD8

- c. Prepare the reports in the Contractor's format. Submit the reports using any of the following electronic formats:
- (1) Files readable using these Microsoft\* Office XP or Microsoft\* Office 2002 and lower Products: Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print or scan images of spreadsheets are not acceptable. Please see security note below for caution regarding use of macros.
- (2) Files in Adobe PDF (Portable Document Format). When scanning documents, scanner should be set to 200 dots per inch.
- (3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to Internet websites or web pages for reference information. All linked information must be contained within your electronic report, and be accessible offline.
- (4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten (10) calendar days before the draft report's due date. All alternate methods must be at no cost to the Government.

NOTE (Macros): The virus scanning software used by our e-mail systems cannot always distinguish a macro from a virus. Therefore, sending a macro embedded in an e-mail message or an e-mail attachment may cause the e-mail report to be quarantined.

- \* Registered Trademark
- \*\* Revised by Modification P00005

PIIN/SIIN W56HZV-04-C-0314
MOD/AMD P00005
ATT/EXH ID
PAGE 8

- d. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, another acceptable media is a 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.
- (1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Previously "zipped" files were accepted, but due to security concerns these zipped attachements cannot be received through our mail system. You may use multiple e-mail messages if necessary, however you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."
- (2) 650 MEGABYTE CD ROM to be delivered via U.S. Mail or other carrier. The Contractor shall label all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number. Exterior mailing envelopes containing disks must be addressed to the following address:

Dr. David Lamb (AMSRD-TAR-N), MS 157 U.S. Army TACOM Life Cycle Management Command (TACOM LCMC) 6501 East 11 Mile Road Warren, MI 48397-5000

NOTE: Please select only one medium by which to transmit each report. For instance, do no submit a report via e-mail and CD ROM.

PIIN/SIIN W56HZV-04-C-0314

MOD/AMD P00005

12. DATE OF FIRST SUB:
See Block 16
13. DATE OF SUBS. SUB:

See Block 16

1

ATT/EXH ID

PAGE 9

1. DATA ITEM NO....: A005

TITLE OF DATA ITEM...: Presentation Materials
 SUBTITLE.....: CMTS / SGSA Training

4. AUTHORITY..... DI-ADMN-81373(T)

5. CONTRACT REFERENCES...: Scope of Work (SOW), Sections C.6.5.1 and C.6.5.2

6. REQUIRING OFFICE.....: AMSTA-TR-R 9. DIST. STATEMENT REQUIRED:

7. DD250 REQ.....: DD 10. FREQUENCY: See Block 16

8. APP CODE..... 11. AS OF DATE:

14. DISTRIBUTION A. ADDRESSES B. COPIES: DRAFT FINAL

Dr. David Lamb, Contracting Officer's Representative (COR), E-mail: LambD@tacom.army.mil

15. TOTAL: 1

### 16. REMARKS:

a. See DID DI-ADMN-81373, at the following internet address:

http://assist.daps.dla.mil/docimages/0001/58/88/81373.PD2

Note Tailoring: Add the following requirements to DID DI-ADMN-81373:

- 10.3 Requirement. The Contractor shall deliver two(2) one to two (1-2) consecutive day short course training seminars at TACOM, Warren, MI, for six (6) people, on the use of the CMTS software: one seminar by 30 Sep 07, and one seminar by 30 Apr 09. The Contractor shall coordinate the training arrangments with the COR, and shall provide a seminar outline and copies of training materials, for six (6) people, to the COR one (1) month prior to the scheduled seminar date. The training seminar must include an overview of the mathematical foundation of the CMTS, with a thorough discussion of program assumption, capabilities, and limitations, instructions on general use of the software tools, and an overview of template development for incorporating future technology upgrades.
  - b. The COR is responsible for accepting or rejecting the training materials.
- c. Prepare the training materials in the Contractor's format. Submit the training materials using any of the following electronic formats:
- (1) Files readable using these Microsoft\* Office XP or Microsoft\* Office 2002 and lower Products: Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print or scan images of spreadsheets are not acceptable. Please see security note below for caution regarding use of macros.
- (2) Files in Adobe PDF (Portable Document Format). When scanning documents, scanner should be set to 200 dots per inch.
- (3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to Internet websites or web pages for reference information. All linked information must be contained within your electronic report, and be accessible offline.
- (4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten (10) calendar days before the draft report's due date. All alternate methods must be at no cost to the Government.

NOTE (Macros): The virus scanning software used by our e-mail systems cannot always distinguish a macro from a virus. Therefore, sending a macro embedded in an e-mail message or an e-mail attachment may cause the e-mail report to be quarantined.

- d. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, another acceptable media is a 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.
- \* Registered Trademark
- \*\* Revised by Modification P00005

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 P00005

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- (1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Previously "zipped" files were accepted, but due to security concerns these zipped attachements cannot be received through our mail system. You may use multiple e-mail messages if necessary, however you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."
- (2) 650 MEGABYTE CD ROM to be delivered via U.S. Mail or other carrier. The Contractor shall label all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number. Exterior mailing envelopes containing disks must be addressed to the following address:

Dr. David Lamb (AMSRD-TAR-N), MS 157
U.S. Army TACOM Life Cycle Management Command (TACOM LCMC)
6501 East 11 Mile Road
Warren, MI 48397-5000

NOTE: Please select only one medium by which to transmit each report. For instance, do no submit a report via e-mail and CD ROM.